Province of
British Columbia
Ministry of
Lands, Parks
and Housing

Naikoon Provincial Park
Master Plan

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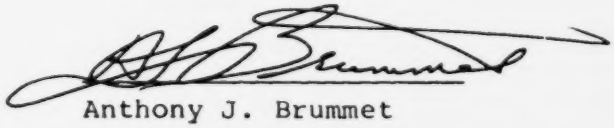
FOREWORD

Naikoon Provincial Park is one of the most significant maritime parks in Canada. It provides a setting for a wide variety of recreational pursuits and conserves important landscapes representative of our British Columbia heritage.

Recently the park has become a destination for tourists, and policy coordination, in the form of a Master Plan, is necessary to give guidance to the operation, management and development of the park. This plan represents current Ministry policy and is to be reviewed every five years, or more frequently, as new information makes policy changes necessary.



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SKEENA REGION
PARKS AND OUTDOOR RECREATION DIVISION
MINISTRY OF LANDS, PARKS AND HOUSING
SMITHERS, BRITISH COLUMBIA

NAIKOON PROVINCIAL PARK

MASTER PLAN

MARCH 1983

SUMMARY

. Naikoon Provincial Park provides excellent representation of the Queen Charlotte Lowlands Regional Landscape. Important features of this Landscape are the extensive dune formations of the shores and bog formations of the park interior.

. Recreational use is increasing due to an influx of tourists borne on the new ferry system. Outdoor Recreation facilities are in short supply on the islands and there is need for additional camping opportunities.

. Recognition will be granted to traditional forms of recreation; however, uses will be zoned in a non-conflicting manner, compatible with the environment and consistent with park objectives.

. The Tow Hill and Tlell areas will be zoned Development; the highway, north beach and Mayer Lake will be zoned Natural Environment; and the east beach and park interior will be zoned as Wilderness.

. Off-road vehicle use will be permitted only on the north beach between Tow Hill and Rose Spit, below the drift line.

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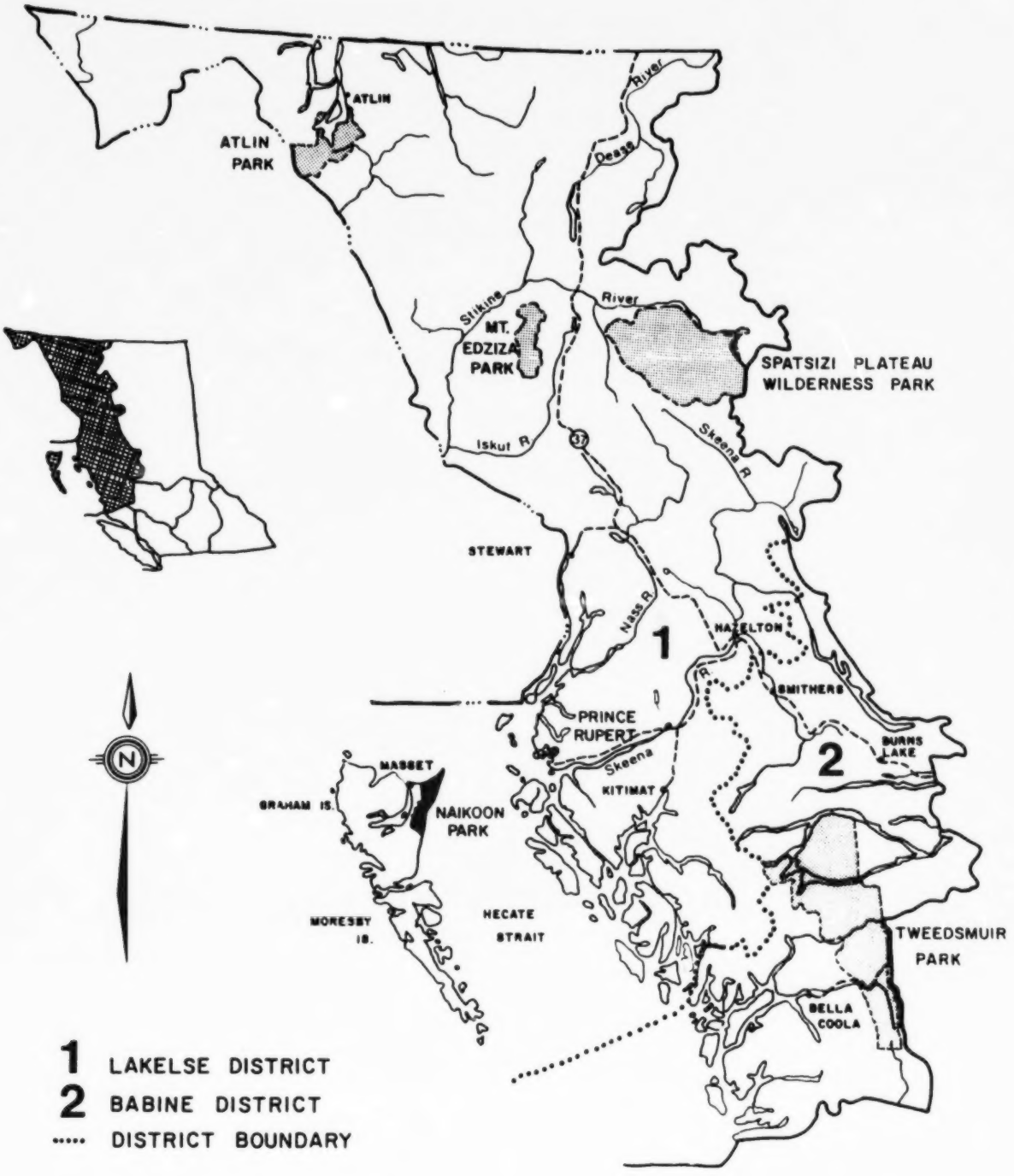
I. Introduction

PARK LOCATION



SKEENA REGION

FIGURE 1

A. BACKGROUND

Naikoon Provincial Park was established as a Class A Provincial Park by an Act of Legislature in 1973 to preserve an area of great recreational and ecological significance on the Queen Charlotte Islands. Covering approximately 72,500 hectares on the northeast corner of Graham Island, the park encompasses almost 100 kilometers of the finest, most expansive beaches on the west coast of Canada and a large tract of bogs and wetlands.

Naikoon Park fulfills important provincial recreation and conservation goals as an excellent representation of the Queen Charlotte Lowlands Landscape containing beach, river and wildland recreational opportunities. The hinterland of the park consists predominantly of flat, low-lying sphagnum bogs with stunted trees and numerous small lakes and ponds. The shores encompass outstanding examples of beach formations such as sand dunes, estuaries, sand spits and offshore bars and provide excellent recreation opportunities. Beachcombing, horseback riding, clam digging, wildlife viewing and "beach buggy" activities are traditional pastimes of island residents.

Wildlife values are largely representative of the Queen Charlotte Islands with many species residing year round in the park. Bird habitats are not diverse but during spring and fall the river estuaries and beaches abound with migratory waterfowl. Grey whales, seals and sea lions are often seen along the shores. Inland, deer and beaver are abundant, as are a host of smaller mammals such as pine marten, otters and raccoons. Although the land now encompassed by the park was pioneered in the early 1900's, settlement did not last. Today, little remains of early homesteading attempts and the land has returned to an almost totally wild state.

The park is named from the Haida word "Nai-Kun" which means "long nose" and refers to Rose Point, a prominent spit formed by longshore drifts of sand driven by the pounding waves of Hecate Strait and Dixon Entrance.

DIXON ENTRANCE
LANGARA I.
ROSE SPIT
MASSET
NADEN HBR.
GRAHAM I.
NAIKOON PROVINCIAL PARK
MASSET INLET
PORT CLEMENTS
TLELL
RENNEL SOUND
QUEEN CHARLOTTE CITY
SKIDEGATE
SANDSPIT
HECATE STRAIT
MORESBY I.
CUMSHEWA HD.
LOUISE I.
PACIFIC OCEAN
LYELL I.
QUEEN CHARLOTTE ISLANDS
SCALE
0 5 10 15 20
KILOMETERS
ANTHONY IS. PROVINCIAL PARK
KUNGIT I.
N

FIGURE 2

B. CONTEXT

Access to the islands is by daily air services from Prince Rupert and Vancouver, or by twice weekly ferry service from Prince Rupert across Hecate Strait.

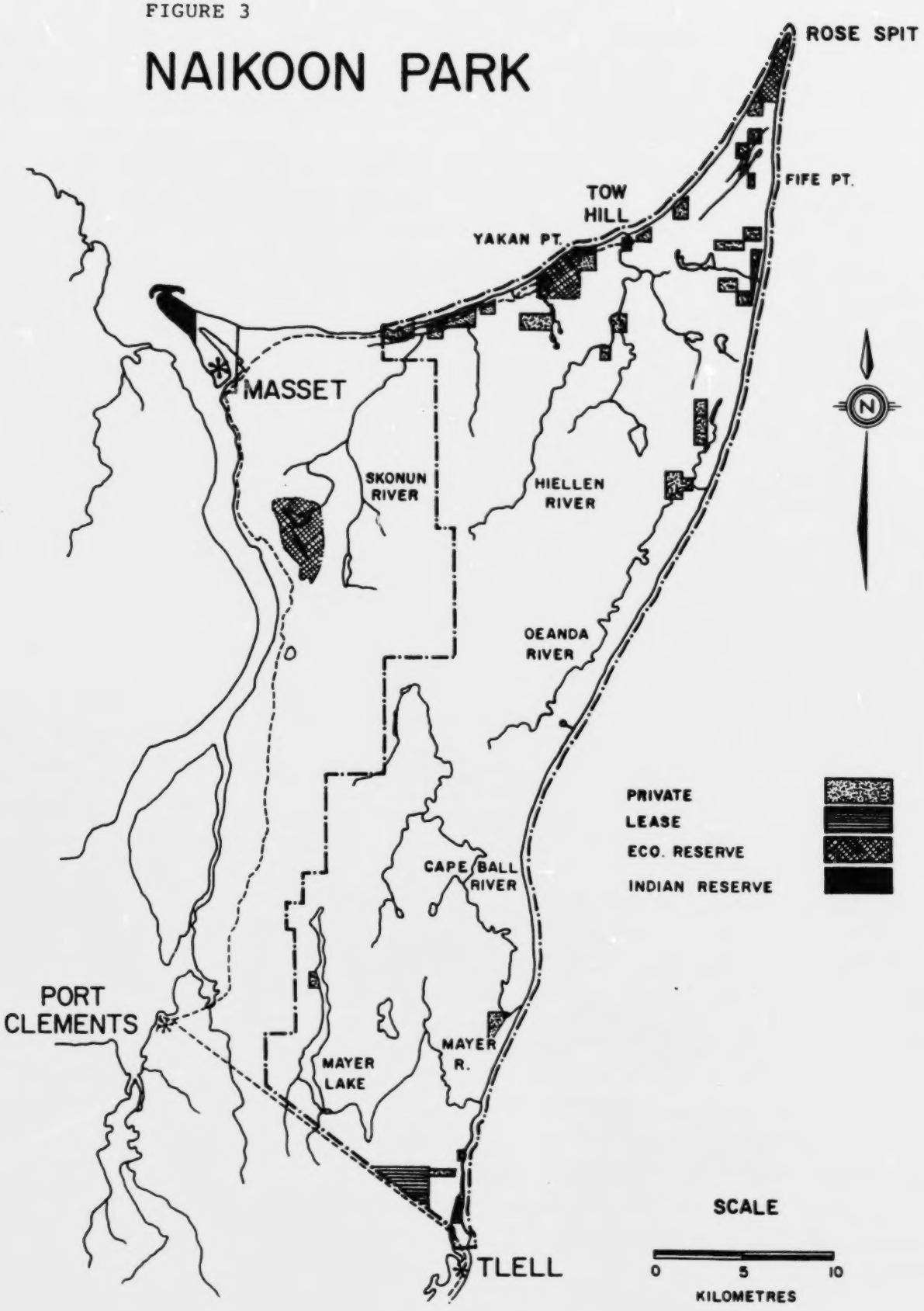
The park may be reached by paved road along the southern boundary and by gravel road along the north beach.

Other provincial parks on the Queen Charlottes are Anthony Island, a small remote heritage park on the southwestern shore of the archipelago and Pure Lake a swimming beach near Masset.

Situated 155 kilometers off the mainland coast, with a mild climate and small population, the Queen Charlotte Islands afford a lifestyle unique to British Columbians. The remote location has enabled residents to enjoy freedoms in their outdoor recreation which are unheard of in the rest of the province. The climate is forgiving, the scenery is superb, the land provides ample game and the waters yield abundant seafood. Islanders are justifiably quick to defend their environment and way of life.

Indeed, in one way or other, many residents directly depend on the environment for their living as well as their recreation. Logging the dense timber and fishing the productive waters are the two most important sources of employment. Recently mining and military service have developed as secondary sources.

FIGURE 3


NAIKOON PARK
ROSE SPIT
FIFE PT.
TOW HILL
YAKAN PT.
MASSET
SKONUN RIVER
HIELLEN RIVER
OEANDA RIVER
CAPE BALL RIVER
PORT CLEMENTS
MAYER LAKE
MAYER R.
TLELL
N
PRIVATE
LEASE
ECO. RESERVE
INDIAN RESERVE
SCALE
0
5
10
KILOMETRES

C. DEMAND

The islands have a total population of approximately 5,000 people, most of whom reside at the towns of Sandspit, on Moresby Island and at Port Clements, Queen Charlotte City, Skidegate and Masset, on Graham Island. Since the number of island residents is relatively small, local use in the park is generally light.

Little factual use data has been gathered for Naikoon Park; however, traditional recreation patterns are clearly defined. The expansive sand beaches are the focal point for use and recent observations by park staff indicate a moderate growth in visitation.

With establishment of the ferry system to the islands, recreational use has increased significantly. The ferry transports 86 cars per trip, three or four trips per week, and will operate at capacity throughout the summer season. Tourists, particularly residents of B.C., are extremely eager to see and explore the islands, which until recently have been out of reach to normal tourism traffic. Demand for ferry space is already high and during summer a large percentage of ferry traffic consists of new visitors.

Few public camping facilities exist on the Charlottes. Although small forest campsites have been developed on some of the lakes, there are no major public recreational facilities and most camping occurs randomly on Crown Land throughout the islands. One small privately owned campsite has been constructed near the Tlell River bridge.

D. RECREATIONAL USE PATTERNS AND EXISTING DEVELOPMENT

Existing use focuses on two main areas in the park, the north beach and Tlell. These areas provide good access to beaches and rivers and are very attractive for recreational purposes. Day use, camping, fishing and beach activities are heaviest here and it is anticipated that these areas will continue to accommodate most use.

Traditionally, clam digging, beachcombing and recreational driving have been very popular on the north beach between Tow Hill and Rose Spit while the east beach has been only lightly used for these activities.

Mayer Lake, in the southwest corner of the park, has also received a significant amount of use although not to the level of the areas listed above. This long, narrow, shallow lake is used for boating, fishing, camping and picnicking.

Wilderness hiking is becoming increasingly important with many backpackers now walking the 70 kilometer distance between Tlell and Rose Spit as an extended wilderness beach hike.

Existing recreational developments consist of a small day use area and fourteen unit campground at Tow Hill, a picnic site and boat access at Mayer Lake and a small day use area at Tlell. Administrative facilities consist of an office and service buildings at park headquarters in Tlell.

II. Purposes and Goals

A. PURPOSES OF THE PLAN

The influx of tourists, combined with escalating demands for use of the park, clearly indicates that policy coordination in the form of a Master Plan is appropriate and timely. It is necessary to introduce policy which will conserve fragile park environments and provide beneficial recreational experiences to park visitors.

The purpose of this plan is to direct future management, planning, information and facility development programs within Naikoon Park for the next five years.

It has a basic aim to ensure that an adequate level of service and opportunity is provided to the majority of visitors while conserving, protecting and presenting park resources.

The plan notes, in general terms the biophysical and cultural features for which the park was established, states goals and objectives, and defines resource and recreation management policies appropriate to achieve them.

B. PARK GOALS

The Parks and Outdoor Recreation Division has fundamental mandates to preserve representative examples of the natural diversity of the Province and to provide equitably distributed opportunities for the public to participate in a variety of outdoor recreation pursuits and experiences.

Naikoon Park makes important contributions toward achieving Division goals since the land is highly representative of the Queen Charlotte Lowlands Regional Landscape and the extensive beaches are extremely important for recreation and tourism purposes. The beaches, with their exceptional dunes and plant associations, are the major focus of recreational use, offering opportunities to beachcomb, camp, study nature, hike and picnic. The inland bogs are excellent places to observe wildlife and study the dynamics of natural plant successions.

The following goal statements are provided to give basic direction and purpose to park policy. Further sections will outline policy consistent with achieving these broad goals.

1. Conservation Goal

- To conserve a representative example of the Queen Charlotte Lowlands Natural Landscape for its inherent biological and geological values. Special Natural Features of this landscape include the shoreline process zone with its outstanding beach, dune and spit formations and the terrestrial zone with its extensive marsh, sphagnum bog and pond formations.

2. Recreational Goal

- To provide adequate and appropriate outdoor recreation opportunities for residents and tourists in developed and wilderness situations. Such opportunities may take the form of picnicking, camping, nature study, hiking, wilderness exploration, viewing, hunting, horseback riding, fishing and wildlife observation.

III. Park Resources

FIGURE 4
PHYSIOGRAPHIC SUBDIVISIONS

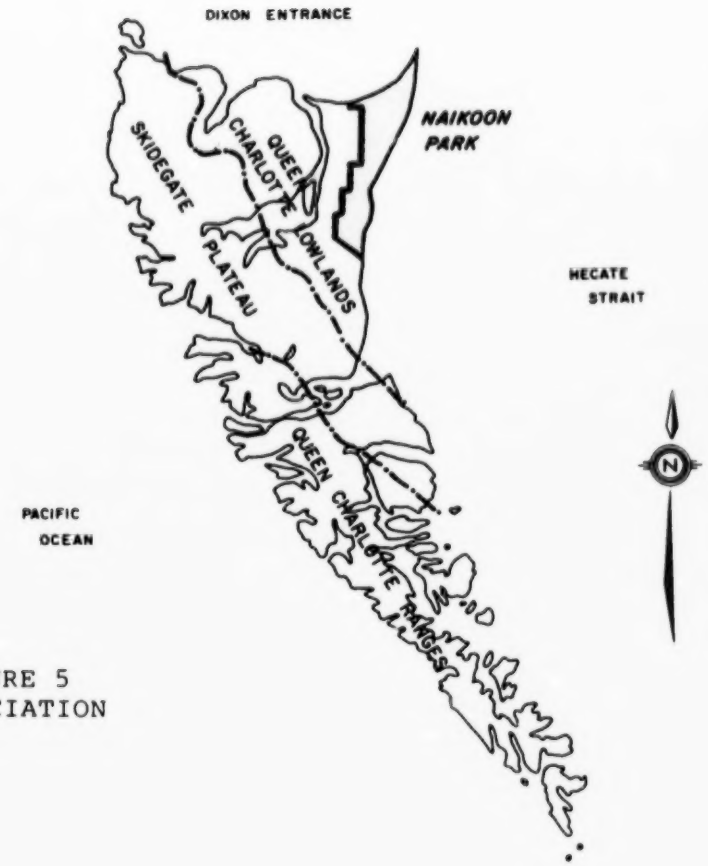
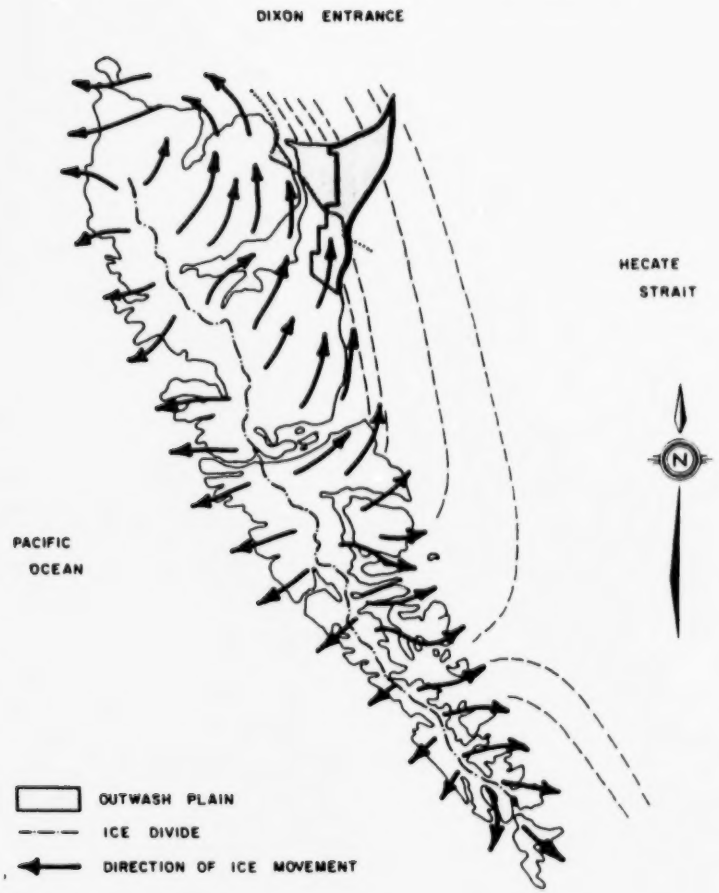


FIGURE 5
GLACIATION



III. PARK RESOURCES

A. BIOPHYSICAL RESOURCES

The following is a brief summary of the biophysical resources of the Park largely drawn from Cannings' comprehensive analysis and inventory entitled "Interpretation Assessment of Naikoon Provincial Park, 1975." It is included to give the reader a basic understanding of the biological and geological processes at work within the park since policies outlined later in the plan are related to the land and its capacity to withstand recreational use.

1. Physiography

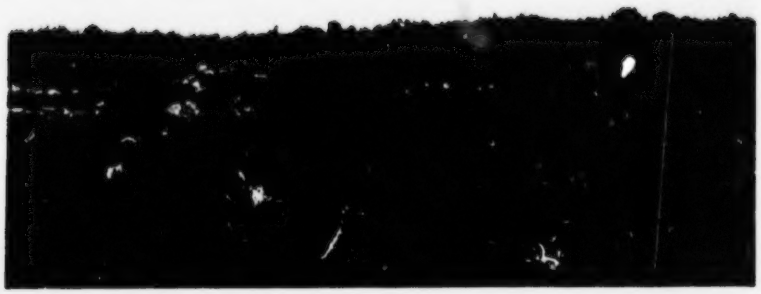
The Queen Charlotte archipelago lies 150 kilometers off the mainland coast and is one of the few areas in British Columbia which was not totally glaciated during the last ice age. Naikoon Park was formed as a glacial outwash plain and is part of the Hecate-Georgia Straits Coastal Lowlands Natural Region. (See Figures 4 and 5.)

The islands lie on the extreme western edge of the continental shelf. The westerly mountains peak at about 1,200 meters and drop 3,000 meters below the surface of the sea to the Pacific Ocean floor. The eastern parts of the island slope gently to Hecate Strait, a shallow, sandy basin only 20 to 100 meters deep, which fronts on Naikoon Park.

The park is situated on sand and gravel outwash material known as the Queen Charlotte Lowlands and the majority of the upland is less than 60 meters above sea level. Argonaut Hill is the highest point in the park at 175 meters.

The low, flat topography is poorly drained and most watersheds contain slow, meandering creeks with numerous lakes and ponds. Drainage patterns are intricate and it is often difficult to determine where one watershed ends and the next begins.

The interior of the park is a low, wet, boggy landscape known as the Argonaut Plain.



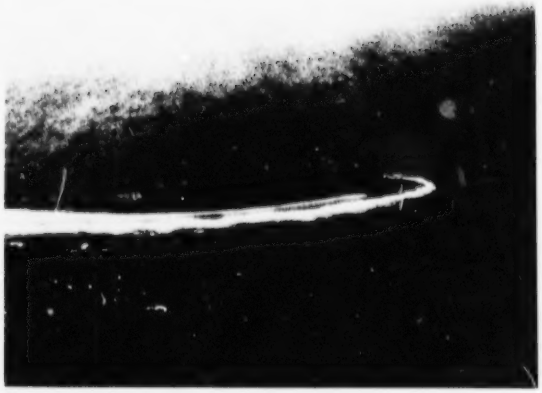
Most lakes are shallow with mud bottoms, and characteristically black/brown in colour due to tannins dissolved from decaying vegetation. Mayer Lake is the largest at approximately 10 square kilometers; however, most are only a few hectares in size.

Along the ocean shores of the Queen Charlotte Lowlands the relentless erosion of wind and waves on the outwash materials has sorted and shifted sands and gravels into extensive beach formations. With the exception of two rock outcrops, at Tow Hill and Yakan Point, the entire shore of Naikoon Park is a continuous unbroken stretch of beach.

The prevailing southeast winter winds and wave action of Hecate Strait continually transport sands and gravels northward along the east coast of the park forming spits, blocking creek mouths, and creating estuaries and lagoons. Offshore bars form and disappear and extensive active sand dunes drift into the trees over large areas causing continual changes in the shoreline.

The east beach terminates at Rose Spit where some of the sand disappears into deep water and some is swept round the spit southwestward along the north beach toward Tow Hill.

The north beach is generally wider and flatter than



Rose Spit

The estuary of the Tlell River

the east beach because the coastline fronts across the direction of the prevailing northwest summer winds and longshore drift is not as prominent. Instead of large active dune zones, the backshore has extensive long beach lines stabilized by vegetation. Often the low areas between these ridges are wet and in some cases creeks and ponds have formed in them.

A detailed discussion of sand dune formation is provided in Section 5.

2. Climatic Influences

The Charlottes are affected by warm, moist Pacific winds which moderate seasonal fluctuations of temperature and cause heavy precipitation and cloud cover. The average January temperature for the islands is 2° to 4° C, and the mean summer temperature is a rather cool 13° to 15°C. Seasonal fluctuations in precipitation are also relatively low. During the rainy winter season precipitation usually exceeds 125 mm each month but during the "dry" summer that average is only 50 - 100 mm per month.

Measurable precipitation falls at Masset (the closest weather station to the park) on an average of 14 days per month throughout June, July and August and the summer sun shines only about 210 hours per month (43% of possible hours). Conditions at Tlell and the Southern portion of the park are somewhat warmer and drier.

Snow occasionally falls in winter but usually melts within a very short time since freezing temperatures are unusual. Although the winter

months are wet and often stormy, the relatively moderate temperatures permit year-round use of Naikoon Park.

The warm, wet, windy climate has significant influences on the activities of recreationists and park operators. As well as facing the possibility of being wet and uncomfortable, hikers and backpackers on the beach are often forced to walk with prevailing winds to avoid facing wind-driven sand and rain. Dry wood can be difficult to find making it hard to start campfires and, because of the dampness, park visitors consume more firewood than normal. Construction of trails and recreation facilities can be extremely expensive since the saturated organic soils turn to mud at the slightest disturbance. The climate does, however, produce luxuriant vegetative growth which often recovers quickly from human disturbances.

3. Flora

The park is situated in the Coastal Western Hemlock Biogeoclimatic Zone (Krajina). This zone is characterized by stands of western red cedar, western hemlock and Sitka spruce coniferous trees. The warm moist climate encourages growth of very large specimens on suitable soil types and promotes an extremely lush understory with devil's club, alder and mosses on the forest floor. Such primeval forests are an outstanding feature of the Queen Charlotte Islands with some fine examples found in Naikoon Park.

However, most of the park is not within this climax forest type due to adverse soil conditions - either extremely dry (well drained) or extremely wet (poorly drained). In these situations vegetation is composed of dune or bog plant communities, often found within a few feet of one another with conditions for growth at opposite extremes due to the vastly different soil moisture regimes. Details of the vegetation patterns found in these adverse conditions are provided in III. A. 5.

4. Fauna

a. Intertidal Life

Naikoon Park does not have as extensive an intertidal biology as might be expected from the amount of coastline available. There are three general types of shoreline present - sand beaches, rock outcrops and boulder beaches.

The north beach at Tow Hill is extremely popular with the Islanders. At left, a party digs Razor clams during low tide. An estimated 7.5 million clams inhabit the sands of the north beach.

Since exposed sand beaches are extremely hostile environments, the only large animals able to survive are burrowers. They must have the ability to escape the force of crashing waves, survive the desiccation of low tides and sunshine, and feed themselves. The primary method of defense is burrowing and the major sources of food are waveborne plankton or seaweeds and detritus washed ashore.

The broad, flat expanse of sand on the north beach has traditionally been accessible for motorized vehicles. Beachcombing is a popular pastime.

Possibly the most notable creature found on sand beaches is the razor clam. This clam has been an important

Rock outcroppings in the intertidal zone occur at only two places in Naikoon Park - Tow Hill and Yakan Point. They harbour extremely interesting and diverse forms of marine life.

food on the islands since aboriginal times and clam digging is a favored pastime of local residents. The population of clams on the north Beach is estimated to exceed 7.5 million and eighty percent of these live between the 0 and 1 meter tides. Razor clams were once an important commercial species and between 1924 and 1930 a clam cannery was operated near Tow Hill.

Some other common creatures observed on the sand beaches are the sandhopper, moonsnail, olive snail, giant scallop, horse clam, littleneck clam, butter clam, whelks and crabs.

Rock outcrops are limited in the park, occurring only at Yakan Point and Tow Hill, but because they provide a stable substrate in a nutrient rich environment, they harbour the greatest

habitat diversity. Rock outcrops exhibit a typically distinct series of vertical zones, each defined and inhabited by representative creatures specifically adapted to that zone.

The upper zone is called the splash zone and is largely composed of bare rock and brackish pools. Characteristic creatures found here are the limpet, small barnacles and periwinkles.

The high and middle intertidal zones are largely defined by a zonation of algae types. The high intertidal is dominated by the rockweed *Fucus*, green *Ulva* and the red *Rhodomela larix*. Typical creatures are large barnacles, large limpet and predatory snails. In tide pools, sculpins, hermit crabs, and anemones are usually found. Below the *Fucus* band, kelp and red alga are the defining species. The animals found here show a transition between the high and low intertidal zones.

The low intertidal zone shows the richest concentration and diversity of life. Characterized by several algae types which provide diverse habitat, this zone abounds with sea creatures. Tube worms, purple sea stars, mussels, blood stars, chitons, tritons, keyhole limpets, green anemones, green sea urchins, sponges and nudibranchs are commonly found here.

One extensive boulder beach occurs in the park, at Tlell. Unlike the rock outcrops, zonation is vague and gradual due to the gentle slope of the beach. Significant features are tidal pools and eelgrass beds.

The most notable invertebrates on this beach are the starfish - leather stars, blood stars, sun stars, sunflower stars and six-rayed stars. Barnacles encrust the rocks and sea

worms, sculpins and shore crabs inhabit the tide pools.

The beds of eelgrass form tangled mats which provide stable habitats for many species of small animals. Decorator crabs, transparent shrimp, rock crabs, snails and chitons are common. (from Cannings, 1975)

The estuary of the Tlell River affords excellent Cutthroat Trout and Coho Salmon fishing. Most of the upland on the spit is private land.

b. Fish

Naikoon Park has an important sport fishery primarily based on coho salmon, steelhead, dolly varden and cutthroat trout.

Coho salmon enter the Tlell, Sangan, Hiellen, Cape Ball, Oceanda and Mayer Rivers to spawn. The major run is in the Tlell between September 1 and October 15, and during this period when high tide approaches, fishermen line the shores of the estuary to cast for the 12 pound average fish.

Steelhead may enter park waters in December and remain until April. As with coho, the Tlell River has the largest run and a smaller population has been identified in the Hiellen River.

Dolly varden are primarily seagoing in this area, entering most rivers during June and July.

Both sea-run and resident cutthroat trout are found in the

park and are commonly fished for in the Tlell River, Sangan River and Mayer Lake. The Tlell and Sangan in particular support a sea-run population which is fished quite heavily between August and November.

Runs of pink and chum salmon also occur but are not considered sport fish under Federal regulations.

One of the more interesting species on the Islands that has received extensive study is the common three spined stickleback. It has been discovered that in some lakes, in or near the park, stickleback are exhibiting distinct adaptive variations in form. In lakes where no fish predators (trout or char) exist, dragon fly larvae flourish and become an alternate predator on young stickleback. In response to this form of predation, some stickleback population have lost dorsal and pelvic spines and lateral scutes, thus reducing grapple surfaces making it difficult for dragon fly larvae to grasp and hold them. In large lakes, some stickleback have retained their spines and grown larger as defense against loons, grebes and kingfisher which prey on them as adults. This phenomenon is found in only three locations throughout the world and the boy landscape of Naikoon Park offers a relatively undisturbed laboratory for its study. (Reimchen, 1981)

c. Birdlife

The number of breeding species found at Naikoon Park, relative to the total number of species on the islands is greatly reduced due to a lack of habitat diversity. However, the wide beaches, river estuaries and meadows provide resting and feeding places for many migratory species, especially shorebirds and waterfowl, in spring and fall.

Some of the more obvious birds found in the park are sandhill cranes, eagles, crows, ravens, Canada geese, mergansers, redthroated loons, common loons and grebes. Sandpipers, plovers, black oystercatchers and cormorants are common as well.

d. Mammals

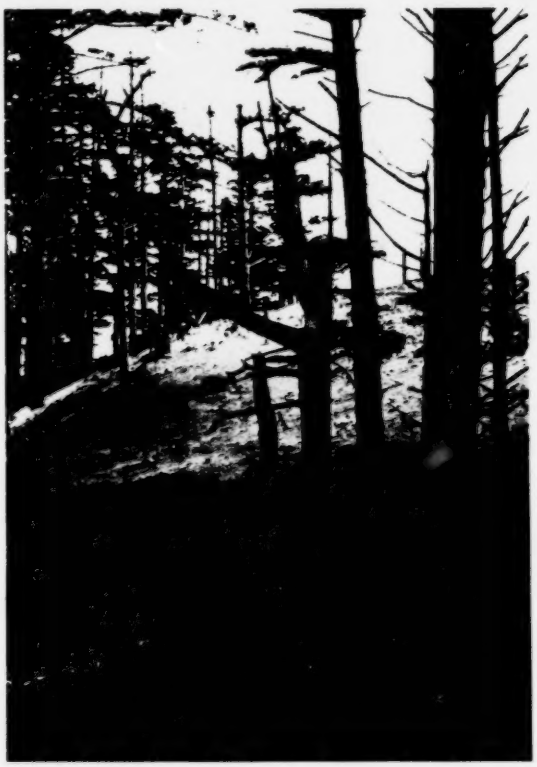
Because of its insularity, the Queen Charlotte Islands group has a limited number of mammalian species compared to the adjacent mainland. Since the 1900's, however, a number of species have been introduced and have caused considerable disruption.

Land mammals native to the park include: dusky shrew, silverhaired bat, California myotis, keen myotis, little brown myotis, whitefooted mouse, American black bear, marten, short-tailed weasel, river otter and, historically, Dawson caribou.

Introduced mammals include: red squirrel, American beaver, muskrat, black rat, Norway rat, Rocky Mountain elk and sitka blacktailed deer. Of these, the deer and beaver have caused considerable disruption. It has been theorized that the introduction of deer may have advanced the extinction of Dawson caribou, and it has been found they are now causing problems by consuming tree seedlings. Beaver are now found throughout the park and are causing extensive flooding in an already saturated environment. The blockage of streams is flooding many bogs and restricting the passage of anadromous fish.

Some of the more interesting species commonly observed in the ocean adjacent to the park are the sea mammals. The largest, grey whales, are often observed feeding along the sand bottom of

the north beach during their annual migrations. Killer whales, porpoises, hair seals, fur seals and sea lions are also occasionally observed.



Sand dunes encroach into the forest at Tlell.

5. Special Landscape Features

Within Naikoon Park, the two most intresting and important landscape features are dunes and bogs. They are extremely fragile, dynamic, everchanging landscapes, vulnerable to mechanical damage and therefore extremely susceptible to human interference. For this reason, special attention will be devoted to them so that policies for their protection will be easily comprehended.

a. Sand Dunes

The vegetation of the upper beaches is more or less similar along the whole coastline of the park. Behind the normal driftwood zone there is a semi-stabilized dune area which becomes progressively more stablilized in the adjacent sitka spruce forest inland.

In a complex relationship with wind, rain and plant communities, the dunes grow, move and stabilize.

Moving Dunes

Sand blowouts and moving dunes are often found in this transition zone particularly at Tlell and Rose Spit.

As the wind picks up sand deposited at the water's edge, sand dunes form continuously along many parts of the coastline. Dunes also form or rejuvenate wherever the vegetation cover has been destroyed so that the surface can be scoured by wind.

Wherever wind carrying sand meets an obstruction, its power is reduced and sand becomes deposited about the obstruction. Thus embryo dunes of foredunes accumulate about rocks, driftwood and plants. The size of sand mounds is limited by the size of the obstruction, such as a rock or log, however, the situation with plants is different.

Sand accumulated around an annual or biennial is dissipated when the plant dies, but a sand-accumulating perennial forms a perennial dune. This dune increases in size as the plant grows, often migrating downwind. Erosion on the windward side slowly desiccates the plants while deposition on the steep lee slope stimulates plant growth.

The characteristics of dune-forming plants and the dunes they initiate are closely related. Upward-growing plants tend to collect a dune that increases rapidly in height while low plants produce a low, broad dune. Most dune-forming plants are perennial grasses and shrubs whose growth is often stimulated by sand covering.

Moving at rates of up to 25 meters a year, wandering dunes have a great effect on the surrounding vegetation.

Small plants may be overridden and killed and many are destroyed without being completely covered due to reduced oxygen about their roots. Migration continues until periods of below-average wind or above average precipitation allow recolonization by plants.

A bare sand surface exposed to winds is an inhospitable environment for colonizing plants since wind-blown sand is very abrasive and destroys many seedlings. Burial is often fatal as well. In summer the high temperature of the sun-heated sand increases transpiration and respiration and often scorches plant seeds. Thus, most successful plant establishment is confined to rainy seasons.

Stable Dunes

In contrast with foredunes, pioneer plants that invade a dune that has lost its momentum initiate a sequence of increasing vegetative cover. They stabilize the surface, provide lodging for seeds and shield the seedlings from sun and wind. Humus accumulation allows the development of amicrobiota that aids in soil production. Lee slopes, being less exposed to the elements, usually support different plants than windward slopes.

Woody dune plants have extensive roots. Permeability of the sand to aeration makes deep-rooting possible and such plants gain in advantage if they can produce long roots to reach limited supplies of water and nutrients.

The usual history of sand dunes is one of alternate breakup and restabilization, with no one dune maintaining its

identity for long. Fire, drought, windfall, logging, overgrazing, recreational use - all have been known to distrub the vegetation and allow erosion to begin. Once disturbance has occurred a bowl-shaped blowout can be produced, developing an active rim on all but the upwind side. The blowouts can increase in size, sometimes up to a kilometer long, until conditions allow plants to recolonize the sand (From Cannings, 1975)

Park management practices will be designed to specifically reduce dune erosion, and all vehicle use, and in some cases foot traffic, must be carefully controlled.

b. Bogs

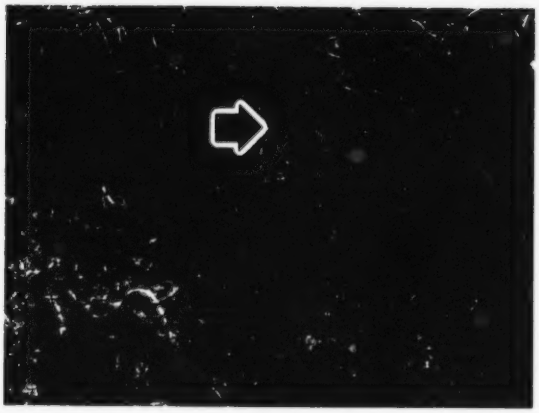
Raised bogs are a most interesting feature of the park and merit close examination since some of the physical relationships between plants suggest continual cycles of growth and pond formation.

The cycle of growth and decay may be described as follows. Commencing at a wet meadow stage, sphagnum may grow in watery depressions between the tufts of rushes. Growing, speading and decaying, it produces small hummocks which, when sufficiently high and dry support a commom moss that builds larger hummocks to the point where they can support woody plants such as the cedar and pine. Once woody plants root, the hummocks are further developed by the growth of the mosses up and around the supporting stems of the plants.

creating a shaded depression where water collects. Small pools may form under and around the plant, eventually killing it.

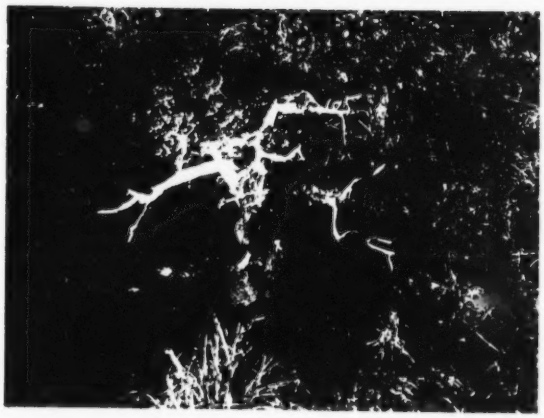
Some pools may become large enough to permit wave action which inhibits the inward growth of sphagnum and causes it to grow vertically, raising the level of the pool. Complex channelization may occur once a head of water is built up and water may begin to flow.

At this point shallow pools may then become choked with two or three different species of floating sphagnum. Gradually, the pools are filled and terrestrial mosses grow inward. When the pool is sufficiently filled, rushes may invade the area forming a meadow, and the cycle begins again. (from Cannings, 1975)



Above, a tiny Pine becomes established on a slightly dried part of the Sphagnum moss

As the pine grows upward and spreads, it shades out and weighs down the sphagnum. The surrounding moss continues to build upward and eventually a depression is created and a small pond forms.



Ultimately, the pine drowns in the pond it created. The mosses grow inward, filling in the pond, and the cycle may then repeat itself.

b. CULTURAL RESOURCES

1. Native Culture

Recognized as one of the world's most interesting seafaring people, the legendary Haida Indians are renowned for their intriguing art, ferocious exploits of other coastal tribes and fascinating ceremonial and cultural practices.

The Haida were reputed to be the most powerful tribe of Coastal Indians. Their isolated position in the north Pacific required construction of massive canoes over 20 meters in length which enabled them to conduct raiding parties as far south as Puget Sound.

Their villages consisted of large, squarish houses, up to 18 meters to a side, usually oriented toward a protected launching site, and situated with a vantage to the ocean.

They lived mostly by harvesting the sea, and their favourable environment allowed them the luxury of fabricating a rich, complicated, artistic society.

A socially complex kinship system, which intertwined with an inherited system of spiritual and ritual functions, maintained a strong hierarchy within each village and extended throughout the Haida people. They had an extreme sense of property and rank which was continually reinforced by elaborate ceremonial rites and extravagant potlatches into rigid social structures.

In each longhouse dwelt an extended family within which a most important man or "chief" was recognized. Within each village, one chief would usually be supreme and he and his family in turn would vie for status within the tribe as a whole.

Prehistorically, an estimated 6,000 Haida lived on the Islands and

archaeological evidence has confirmed that the area within the park has been inhabited for at least 8,000 years. There are twelve known archaeological sites in Naikoon, at least two of which represent villages at Tow Hill and Rose Spit. Very few visible artifacts remain.

2. European Settlement

The Queen Charlotte Islands were the first part of British Columbia to be seen by Europeans. In 1774 Juan Perez sighted what is now known as Langara Island on the northwest tip of Graham Island. Very soon after, a brisk fur trade based on sea otter pelts developed and the influx of explorers, traders and missionaries began. Around 1800, indiscriminate slaughter of sea otters caused their numbers to decrease and trading became ruthless, occasionally turning into violent encounters with the Haida.

Over the next 100 years the native populations declined drastically, largely due to disease epidemics and slowly the remaining individuals from decimated outlying villages congregated at Masset and Skidegate. By the late 1800's, less than 600 individuals remained.

After the turn of the century the provincial government offered pre-emption lands in the Queen Charlotte Islands at attractive prices. As a result, the area now within the Park was almost completely sectioned off into homesteads and between 1908 and 1914 settlers poured in to lay claim to the land. At one point, there were almost one hundred residents living along the north beach.

However, settlement was shortlived. The land was almost impossible to drain and marketing of produce and cattle was extremely difficult due to poor transportation. War and

depression caused much of the land to be abandoned and the population declined again. The forest now has reclaimed most evidence of early settlement and only a few decayed buildings, fences and drainage ditches remain.

For a more complete discussion of the history of Naikoon Park, read Wourinen, 1975.

IV. Park Policy

NAIKOON PARK
ZONING

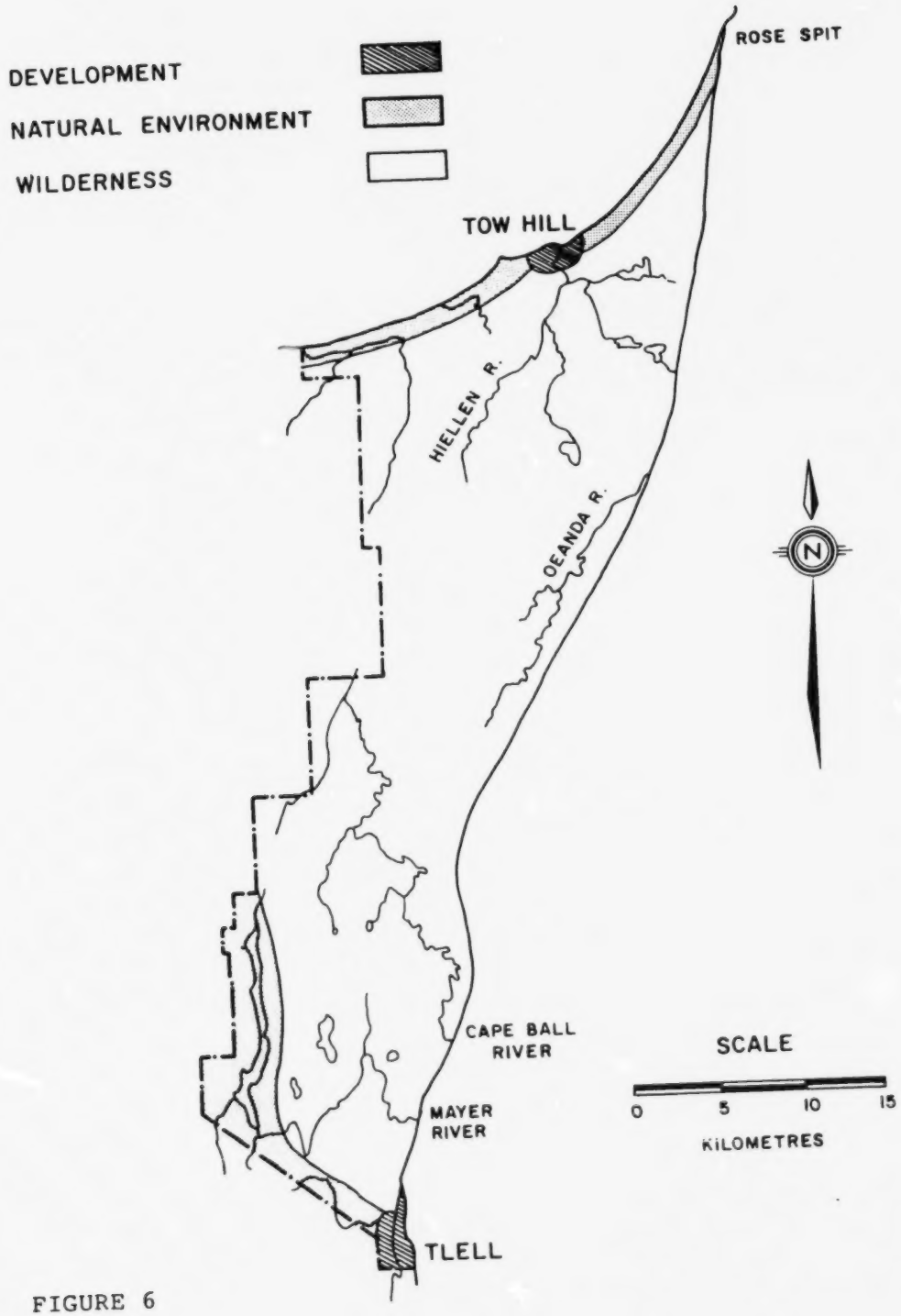


FIGURE 6

A. ZONING

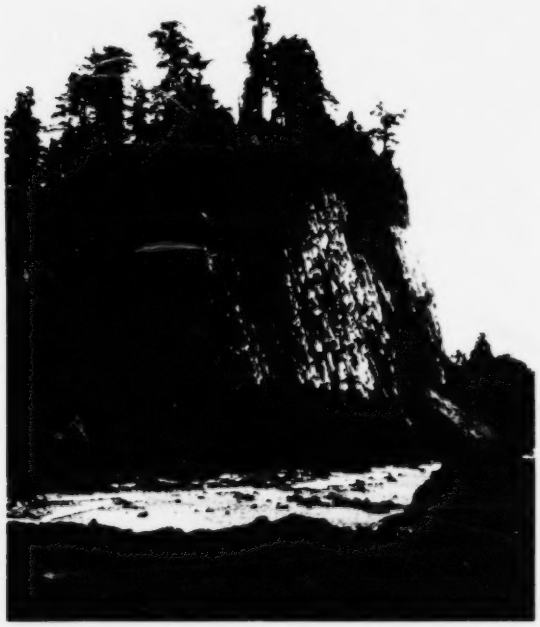
Naikoon Park will be managed for multiple recreational uses and conservation of natural landscapes as outlined in the goals statement. Visitors will be provided with a variety of recreational opportunities and the land base must therefore be zoned to accommodate this variety in a nonconflicting fashion. Furthermore, use must be structured to ensure compatibility with the inherent capacity of the land to withstand it.

Zoning for Provincial Parks and Recreation Areas may be conceptualized as a continuum with maximum attention given to recreation facility provision and limited resource protection at one extreme and limited facility provision and maximum resource protection at the other extreme.

Dividing this continuum three primary levels of zoning have been defined: Development, Natural Environment, and Wilderness. The Development zones primarily provide for a variety of facility oriented recreational opportunities. Natural Environment zones provide for recreation experiences in a natural setting and Wilderness zones preserve landscapes and natural processes and permit low levels of recreational use in an environment with a minimum of human interference. The criteria defining these zones are summarized in Appendix A.

Naikoon park will contain areas within all three zones as delineated on Figure 6.

The windswept shoreline of the east beach is jumbled with driftwood. Note the large dunes in the background. This area will be zoned as wilderness.



Tow Hill, the most prominent landmark in Naikoon Park, is formed of Columnar Basalt. The site has an interesting geological, archaelogical and mythological history.

Tlell and Tow Hill have been defined as Development zones because they are prime access points for exploration of other areas of the park. Most vehicle-based camping occurs in these areas and all future vehicle camping expansions will occur here as well.

Natural Environment zones have been defined for the highway corridor, the north beach and the shores of Mayer Lake. This zone may accommodate motorized access and was therefore chosen in order to permit vehicle use on the beaches between Rose Spit and Tow Hill and to permit the use of outboard motors on Mayer Lake.

Wilderness zoning was chosen for the remainder of the park to protect the fragile dune and bog communities and to provide for wilderness recreation experiences.

B. VISITOR MANAGEMENT

1. Activities

1. Preamble

Naikoon Park lends itself admirably to a multitude of recreational pursuits, particularly those associated with beach environments. Traditional beach activities include picnicking, strolling, day hiking, backpacking, horseback riding, wilderness and vehicle based camping, viewing of scenery, shorebirds and sea mammals, beachcombing and clam digging.

Inland recreation normally consists of wilderness exploration, wildlife viewing, hunting and fishing.

Recognition will be granted to historical recreational uses in the park but these uses must be appropriated in a non-conflicting manner, compatible with the landscape.

b. Objective

To provide opportunities for a variety of non-conflicting recreational uses, suited to specific park environments.

c. Management Actions

i. Recreation activities will be restricted to appropriate zones or designated areas within the park to preserve particular atmospheres or environmental values.

ii. Specific facility provisions will be made for wilderness and vehicle camping, hiking, nature study, boating, picnicking and information services at designated sites. All other recreational pursuits will occur randomly throughout the park according to policy and regulations.

iii. Random camping will be permitted along the north beach until environmental or operational constraints force utilization of developed campsites.

iv. In the area between the Tlell River and the shores of Hecate Strait, random camping will not be permitted due to fire hazard, sanitation problems and sensitive sand formations.

v. Limited commercial recreational guiding will be permitted within the park. Appropriate activities will be authorized under Park Use Permit according to Division policy.

2. ACCESS

a. Preamble

Within any park the various forms of access used by visitors has significant influences on the environment, park operations, and visitor experiences. Mechanized access may often cause severe physical damage to plant and animal communities or destroy wilderness atmospheres. Non-mechanized access usually has far less severe impacts, unless it is heavily concentrated.

Within Naikoon Park, use of beach buggies and four wheel drives has occurred on the beaches and sand dunes.

Occasionally, vehicle caravans have made an expedition of the entire beach frontage in the park from Tlell to Tow Hill. In some areas this use has been quite heavy and caused severe damage to highly sensitive dune environments. Damage to the beaches below driftline has not been apparent and vehicle use does not appear to be seriously detrimental to beach organisms.

The influx of tourists may cause further deterioration to the dunes

unless restrictions are emplaced and regulations enforced to prohibit off-road vehicle use. Furthermore, it may be necessary to restrict foot traffic in areas of heavy use.

b. Objective

To control the forms of access in a manner which will ensure park goals are achieved and zoning plans are effectively implemented.

c. Management Actions

i. Motorized vehicle access may be permitted in Development Zones and Natural Environment Zones.

ii. Motorized vehicles will be permitted in the park on established roadways and on the north beach between Tow Hill and Rose Spit, below drift line.

iii. Access to the east beaches (Wilderness Zone) will be by foot and horseback.

iv. General access may be restricted in specific areas to protect fragile plants, nesting bird colonies or to permit rehabilitation of a site.

v. Horseback riding will be permitted on designated trails and on beaches below drift line.

vi. Letters of Authority will be granted for those occasional vehicle caravans that request to undertake the expedition around the shoreline perimeter of the park and that comply with the specifications defined within the Letter of Authority.

3. Facility Development

a. Preamble

To date, very few facilities have been constructed within the park. A small campground and picnic area are in operation at Tow Hill and a trail has been constructed to the summit of the hill. Small picnic areas have also

been developed at Mayer Lake and Tlell. Also at Tlell, a park headquarters and service buildings are extant.

Additional facilities capable of accommodating increases in tourism visitation will be required.

b. Objective

To limit recreation facility development to that which is required to protect the environment, ensure public safety, and provide an adequate level of visitor services.

c. Management Action

i. The two main areas of development will continue to be at Tow Hill and Tlell.

ii. Park headquarters will continue to be based at Tlell although a seasonal headquarters may be established at Tow Hill.

iii. Future developments at Tlell may include a campground, if the private sector does not accomodate demand, and two small day use parking lots, one near the river and one near the beach. An orientation center will be emplaced near the lodge.

iv. Future developments at Tow Hill will include expansion of the campground, completion of a viewpoint on the summit and installation of interpretive facilities.

v. In the Natural Environment and Wilderness Zones, trails and rustic campsites will be the primary developments. Present trails and campsites will form the basis of this system and existing use patterns will be recognized.

vi. Rustic shelters may be erected on the east beach to assist wilderness hikers.

vii. Recreational guides will be permitted to construct minor facilities only where park objectives are not diminished by such actions.

4. Visitor Services

a. Preamble

To date, very few services have been warranted at Naikoon due to low use levels. Garbage services are now supplied at Tow Hill, Tlell and Mayer Lake. Wood is not supplied since there is an abundance of driftwood, and water is provided only at park headquarters. The influx of tourists may necessitate expansion of services, particularly at the vehicle campgrounds.

b. Objective

To provide adequate services to ensure enjoyable visitor experiences.

c. Management Action

i. Water will be supplied at Tow Hill and Tlell.

ii. Garbage services will be provided at Tow Hill, Tlell and Mayer Lake. The remainder of the park will operate on a "pack it in - pack it out" system.

iii. Firewood will be supplied at Tlell and Mayer Lake day use area. Elsewhere, user collected driftwood will be relied upon.

iv. Fees will be collected in the campgrounds.

v. Sani-station services will not be supplied within Naikoon Park.

5. Interpretation and Information

a. Preamble

An effective information and interpretation program will be an important key to implementation of park rules and regulations. For instance, if visitors understand why sand dunes are so fragile, more cooperation in staying off them can be expected.

The park offers excellent opportunities to present interesting interpretive themes to the public. Bog and dune formations are dynamic, everchanging landscapes and the processes underlying the changes are fascinating to comprehend.

Studies of native culture and early settlement attempts are also relevant to the park.

Presently the park information system consists of a few information boards and a brochure. With increased use it will be necessary to elaborate and expand the system.

b. Objective

To provide the public with interesting and inspiring knowledge of the amenities for which the park was established and to facilitate effective implementation of park management practices.

c. Management Action

i. In the short term, the program will be based from static displays only.

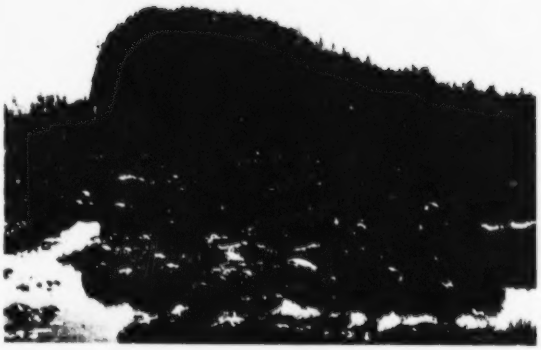
ii. In the long term, interpreters may be employed, should visitor numbers warrant them.

iii. Main themes in the park will include the study of bog formation at Tow Hill campground and the study of dune formation at Tlell. Native and European culture and settlement will be sub-themes.

C. RESOURCE MANAGEMENT

1. Land and Water Management

a. Preamble



Much of the Park is composed of bog landscape. The Tow Hill bog will become an important interpretive area since it contains demonstrative features representative of the important processes of bog formation and decline and is located adjacent to the campground.

Within the park a number of non-park uses presently occur which are remnant from tenures existing from times previous to park establishment.

A large number of private inholdings covering several thousand acres are presently outstanding. Most of the properties date from early settlement attempts and few have legal access. Historically, owners gain access by traversing the beaches and crossing Crown land.

Furthermore, the park contains gravel reserves, Indian Reserves, agricultural land reserves Transport Canada reserves and a graveyard.

Boundaries extend only ten chains beyond high water mark and in many areas low tide extends well beyond this point.

The park was established by statute.

b. Objective

To achieve and protect an adequate land base to ensure park goals are met in perpetuity.

c. Management Action

i. Land will be managed according to the Park Act and regulations.

ii. It is the general intention of the Division to eliminate inholdings and alienations which adversely affect park goals, where feasible.

iii. Park boundaries will be reviewed in order to reduce such problems as inadequate foreshores and to eliminate private lands, where appropriate.

iv. The Regional District of Skeena-Queen Charlotte will be requested to include all private lands within the park in future zoning by-laws.

v. Proposals to construct access roads through the park to private lands surrounded by the park will be entertained only when such roads are considered necessary for the preservation or maintenance of the recreational values of the park in accordance with Section 8 of the Park Act.

vi. Impacts of recreational use on the land will be monitored to prevent environmental deterioration of popular areas. In the event that impacts from use reach serious levels, use patterns will be restructured and the land restored.

vii. The Parks and Outdoor Recreation Division will cooperate with Ecological Reserves on management of recreational use of Tow Hill and Rose Spit Ecological Reserves.

2. Wildlife Management

a. Preamble

Wildlife preservation is recognized as a component of the Queen Charlotte Lowland conservation goal.

Native species are of primary interest; however, the islands now have several introduced species which are causing disruption to Island ecosystems. Introduced species are mostly indigenous to mainland British Columbia and are not normally considered nuisance animals. Within the park, deer and beaver are probably the most disruptive.

Hunting has been a historical use in the park and does not appear to conflict with other recreational uses. Deer hunting is said to be somewhat beneficial since deer are not native and are causing changes to the plant community through heavy browsing. Hunting of migratory birds is not causing significant disruption since it occurs in late fall after the heavy recreating season and often is based on species which are only found passing through the park at that time of year.

Currently there are three active traplines within the park.

b. Objective

To ensure the conservation and perpetuation of wildlife species for recreational purposes.

c. Management Action

i. Hunting will be permitted in the park according to Provincial Hunting Regulations prepared jointly by Fish and Wildlife Branch and Parks and Outdoor Recreation Division.

ii. The park will be closed to the discharge of firearms during the heavy recreational use season as defined within the Provincial Hunting Regulations prepared jointly by the Fish and Wildlife Branch and Parks and Outdoor Recreation Division.

iii. Specific areas may be designated as closed to hunting for allocating time periods, or in perpetuity, in order to assist research, to eliminate conflict with other forms of recreational use or to rehabilitate populations.

iv. In the event that critical population imbalances impose serious threat to any faunal or floral component of the park, the Parks and Outdoor Recreation Division may prescribe management actions to ensure no significant components of the park environment are diminished or destroyed.

v. Existing traplines will be honoured; however, trapping is not consistent with park goals because it is not recreation oriented. The remaining lines will be eliminated through acquisition or attrition over time.

3. Fisheries Management

a. Preamble

Compared to other areas of the Queen Charlotte Islands, recreational fishing within the park is not proportionately significant. Although the park has numerous creeks and small water bodies, many of these are unsuitable habitat for game fish populations. The Tlell River produces many fish, however, only its estuary lies within park boundaries. The Sangan is the second largest producer and lies wholly within the park.

Many of the small water bodies are of significance

largely due to their unique species complex. The intricate drainage patterns in the everchanging bog landscape have given rise to many variations in habitats and the ecologies of similar appearing lakes can be vastly different. As a result, they are extremely valuable to scientific study.

b. Objective

To ensure conservation of existing fish populations while providing quality fishing experiences.

c. Management Actions

i. Fishing regulations will be formulated in consultation between Fish and Wildlife Branch and Parks and Outdoor Recreation Division.

ii. Habitat enhancement and artificial propagation projects will be permitted in the park in circumstances where they do not unduly disturb wilderness atmospheres and environments or scientifically significant population structures.

iii. Populations may be surveyed periodically to monitor trends.

4. Vegetation Management

a. Preamble

The vegetation of Naikoon Park is recognized as a fundamental component of the Queen Charlotte Lowland natural landscape, and indeed, within the park special recognition of particular plant associations has resulted in the establishment of ecological reserves at Tow Hill and Rose Spit. These reserves were set aside to preserve important Coastal Western Hemlock and dune plant associations.

Although much of the Naikoon landscape is not in a climax forest state due to soil conditions, the bog

and dune communities are extremely important features within the park system.

Because of the very fragile nature of dune communities, special park management provisions will be made to protect them.

b. Objective

To ensure conservation of native vegetative associations and successions.

c. Management Action

i. A fire suppression plan will be drafted for the park to ensure protection of public and private properties and park amenities.

ii. Where disease or infestation has rendered forests dangerous to public safety or property, control methods may be introduced.

iii. Grazing of domestic stock will be prohibited in the park when the present open range adjacent to the park is closed.

iv. Specific beach access provisions will be made to ensure protection of fragile plant associations.

5. Research Management

a. Preamble

The large land mass and relatively undisturbed environment of the park make it an excellent outdoor laboratory. Applications from the scientific community are received annually for the collection of soil, plant and insect specimens. Studies of the ecology and adaptive processes of stickleback are ongoing throughout the bog terrain of the Queen Charlotte Lowlands.

Research conducted to date has provided valuable insight into the dynamics of plant and animal communities and proven useful in formulation of management decisions.

b. Objective

To provide opportunities for pure and applied research which will benefit further understanding of the park and aid in management decisions.

c. Management Actions

i. All research will be carried out under the auspices of Park Use Permits or Letters of Authority.

ii. Manipulative research will not normally be permitted.

iii. Research projects will be permitted only when they do not contravene park goals and objectives.

iv. The collection of specimens will be strictly controlled.

6. Cultural Resource Management

a. Preamble

Within the park archeological sites have been identified which demonstrate native occupation of the land for over 8,000 years. To date twelve sites have been discovered and the park has not yet been fully explored. Of these twelve, none have been fully excavated.

Of the early settlement attempts, little remains. A few collapsed buildings, drainage ditches and fallen fences now decay into the landscape.

b. Objective

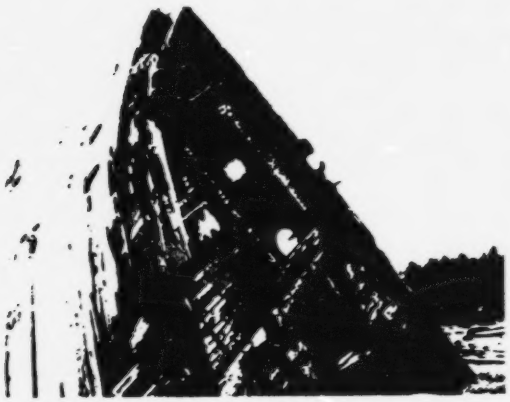
To conserve the cultural and heritage artifacts inherent in Naikoon Park for future investigations.

c. Management Action

i. Known archeological and cultural artifacts will remain undisturbed by park developments.

ii. Efforts will not be expended to stablize artifacts remaining from the European settlement era.

iii. The historic trail network will be used as a basis for hiking trails.



Three kilometers north of the Tlell River lies the wreck of the Pesuta. The 264 foot log barge was grounded on December 11, 1982. All that remains is the bow.

D. PLAN IMPLEMENTATION

Policies outlined are to be effective upon approval of the plan.

Construction of a campground at Tlell is a development priority provided that this service is not supplied through private development within a reasonable time. Ancillary development, chiefly a day use area and interpretation and information facilities, will be provided regardless of private campground development.

Expansion of the Tow Hill campground will occur when it is determined necessary.

V. Appendix

APPENDIX A

Primary Zoning System

ZONE	OBJECTIVES	MANAGEMENT GUIDELINES	FACILITIES/ACTIVITIES
Development	To provide for a variety of facility-oriented recreational opportunities.	-oriented toward maintaining high quality recreation and interpretive experience. -intensive management may be required to ensure that high quality recreation and interpretive opportunities are maintained. -special design consideration generally required. -intensity of developments and standard of facilities are variable and will relate to the objectives for the Park. -private motorized vehicles may be restricted.	-intensive recreational facilities such as auto campgrounds, cabins, lodges, picnic areas, beach and swimming areas, nature houses, information buildings, downhill ski facilities, walk-in campgrounds. -ancillary facilities such as parking, sanitation, picnic tables, restaurants, may be included in this zone.
Natural Environment	To provide for intermediate levels of outdoor recreational opportunities/use in a natural setting.	-management will be oriented toward maintenance or restoration of the natural environment. -visitor access may be restricted to preserve the recreational experience or to limit impact on the area. -designation of transportation modes may be necessary to avoid potential conflicts. (e.g. horse trails, cycle paths, hiking trails) -private motorized vehicles may be permitted. -intensity of management and development will be consistent with moderate levels of recreational use. -visitor support facilities will be limited, and directed toward providing for public safety and minimizing user impact.	-Development and use are consistent with the maintenance of natural conditions. Activities consistent with this zone would be: hiking, camping, canoeing, kayaking, snowshoeing, cross country skiing, nature observation, horse back riding, picnicking, swimming, fishing, interpretation programs. -minimal facilities such as trails, shelters, hikers' campsites, portages, horse corrals, observation blinds, may be developed to compliment these activities, but the emphasis of the development will be toward public safety rather than the encouragement of more intensive levels of use. -visitor facilities will be of a primitive nature.
Wilderness	-To protect and preserve landscapes and resource processes. -To provide for low levels of recreational use in an environment where natural processes occur with a minimum of human interference.	-oriented toward the protection and preservation of the area's atmosphere, environment or ecology, while optimizing recreational opportunities associated with the "wilderness experience". -unstructured visitor mobility. -visitor support facilities will not be provided, except where absolutely necessary to provide for public safety or minimizing user impact. -transportation limited to foot access, and non-motorized boats. -horse travel may be restricted.	-only minimal primitive facilities would be developed consistent with low intensity uses. Activities consistent with this zone include: camping, hiking/mountaineering, canoeing, kayaking, cross-country skiing and snowshoeing, fishing, nature observation.

APPENDIX B

B I B L I O G R A P H Y

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